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# HORIZONS UNLIMITED

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*through  
cooperative  
forestry*

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### HORIZONS UNLIMITED...

Forestry in the South has made tremendous years and its horizons still are unlimited.

If this Report were dated 1913, there would be a pessimistic future for southern forestry. From fire, insects, and disease was the goal. Planned management of forest lands was the development of the pulping process for use in the experimental stage.

The outlook 50 years ago was grim, but men such as Charles Herty, Henry Harrell, and others were convinced that the forest resource could be restored to equal the virgin forest. Events since 1913 have proved how right these men were.

The National Forest system was extended into the South with nearly ten million acres. It provided not only demonstration areas but became a contributor to the southern forest economy. Forest research activities were expanded and technical know-how developed to guide landowners in rebuilding their forest resource. Individual States recognized the importance of rebuilding forest land; consequently, the various State forestry organizations were established. The Extension Service moved into the forestry field and Soil Conservation Districts were organized. Forest industry took a determined stand to rebuild its basic resource and to assist smaller landowners. The Kraft process for use of southern pines expanded so rapidly that we now have 80 operating mills in the Region.

Of the 178,000,000 acres of commercial forest land in the South, 163,000,000 are privately owned. The support by all forest-related industries and forestry-minded citizens has made it possible for the southern State forestry services to develop organizations which now provide forest fire protection to most forest land.

Technical assistance for private landowners has been extended throughout the region. Sufficient tree seedlings are produced to restock forest lands. Control projects are activated as needed to combat epidemics of forest insects and diseases. Extension Foresters and their personnel have promoted better forestry practices. Soil Conservation Districts have made impressive progress in directing local landowner attention to the support and application of good forestry practices.

In addition to the production of timber, many forest landowners now recognize the importance of utilizing their forest acres for other purposes—recreation, wildlife, and water. These uses will provide opportunity for additional income to private landowners and will help in Rural Areas Development.

The dedicated cooperation of Federal, State, and private forestry interests has made possible the excellent advances that now can be observed throughout the South. The key to future progress in developing our southern forest economy lies with the millions of acres of State and private forest lands. We are proud of the progress that has been made, and we are pleased to have been a partner in this outstanding development.

*J. K. Vessey*  
Regional Forester





## FOREST FIRE PREVENTION

The most effective weapon against forest fires is, and always will be, fire prevention.

Techniques and equipment for fighting fires continue to be improved, but every Forester had much rather prevent fires than fight them.

Fire prevention is emphasized in the Alabama State Forester's office from the moment a visitor enters. On the door of Forester J. M. Stauffer's office is a plaque telling all who enter that Smokey says "Prevent Forest Fires." The Forester's stationery has a picture of Smokey saying "turn me over," and on the back of the stationery is a fire prevention message.

Alabama's Foresters put "Smokey" floats in parades in various areas of the State and stress fire prevention in exhibits and talks.

They stress fire prevention but they're also ready in case forest fires do break out. They have fire lookouts and patrol planes watching for smoke and fire fighting equipment and personnel ready to go.

The campaign is paying off, too! The average annual number of fires 1949-53 was 9,479 compared to 7,123 for 1959-63, even though the protected area increased 1,945,000 acres during this period. Due to improved fire suppression efficiency and in spite of the bad forest fire weather of 1963, the average annual percent of protected area burned was reduced from 2.36 to 0.72.



Smokey plaque on door urges State Forester's visitors to "Prevent Forest Fires."

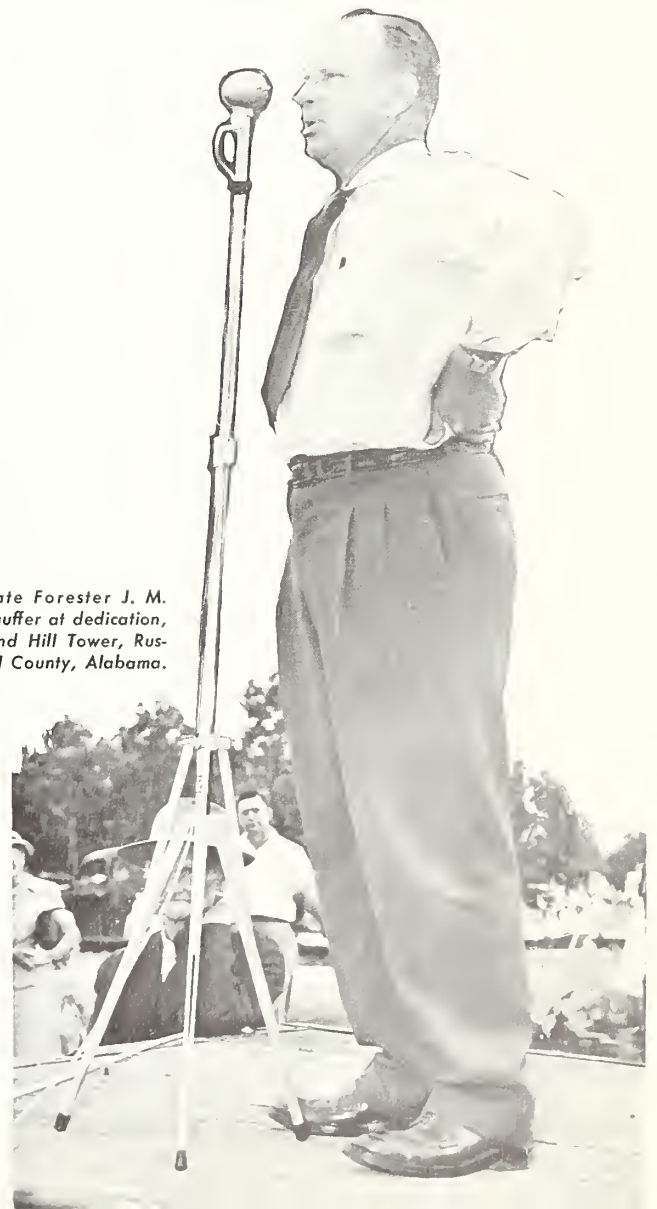


Federal and State Forest Officers with fire control plane of Alabama Conservation Department.

Fire Prevention Parade — Tuscaloosa, Alabama



State Forester J. M. Stauffer at dedication, Sand Hill Tower, Russell County, Alabama.





# ARKANSAS

## INFORMATION AND EDUCATION

An important part of a State's forestry program is telling the public of the need for good forestry practices and educating it to forestry's economic and social significance.

Arkansas features the selection of the State Forest Queen as the highlight of its information and education program. In 1963, more than 900 beauties entered the contest, and each gave a talk on "Better Living from Trees."

The Forest Queen devotes a year to telling various groups about forestry programs. She appears before groups such as civic clubs, farm and youth groups, women's organizations, high school assemblies, trade associations, and many others. She makes more than 250 such appearances.

Selection of the Queen is tied in with a weekly television show which begins six months before the naming of the Queen — ends when she's chosen. The final selection of the Queen is carried on a State network of four television stations.

The conservation program of the Arkansas Forestry Commission also involves newspaper and radio items, visits to schools, forestry camps, field trips, and many other activities. Heavy emphasis is given to forest fire prevention.

During 1963, Commission personnel visited 200 schools, gave 300 radio programs and 375 movie and slide shows, all telling a part of the story of forestry.



State Forester Fred Lang gives report on Arkansas fire situation to wire services.



Lucinda Williams—1963-64 Arkansas Forest Queen.

"Ranger Jim" Martin discusses television show with Forest Queen candidates.





## SMALL LANDOWNERS

Florida's forest products income, now valued at more than a half-billion dollars annually, has a solid billion dollar future.

The key to doubling this value — so important in jobs and payrolls — rests with the State's 93,000 small woodland owners. More than half of Florida's commercial forest land belongs to these people, whose average holding is 100 acres.

One of the big challenges facing the Florida Forest Service is helping these owners realize the maximum return from their lands. The 1963 record indicates that they are going all out to accomplish this. During the year, Farm Foresters helped 4,166 landowners with technical forestry problems on 1,764,000 acres of forest lands. People who received marketing management and other technical help harvested from their timber a gross value of \$837,368, an increase of 16 percent over 1962.

Florida Forest Service Foresters helped small landowners to increase productivity of their lands by giving them technical advice in many activities —

- ... Planting, site preparation, and direct seeding.
- ... Management of forest stands.
- ... Protection from insects and diseases.
- ... Fire prevention and protection.
- ... Marketing.
- ... Assistance with manufacturing processes.

In 1963 the volume of pulpwood harvested by owners receiving assistance increased 15 percent, and the volume of gum naval stores, 85 percent. These give some indication of the effectiveness of Cooperative Forest Management assistance.

# FLORIDA



*Farm Forester checks crown condition before marking in slash pine plantation.*

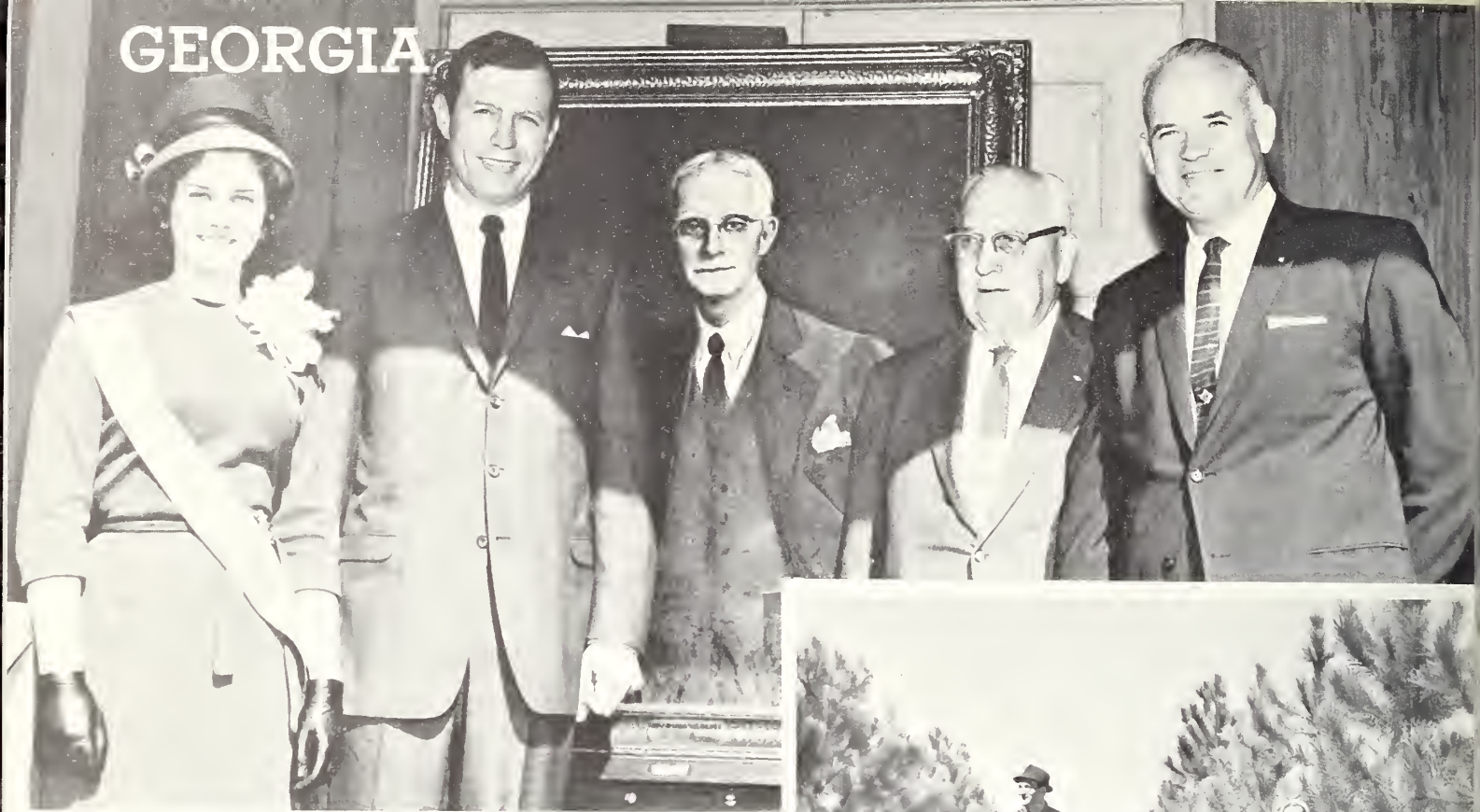
◀ *Farm Forester assists landowner in timber stand improvement.*

*State Forester C. H. Coulter, a leader in the development of Florida's forestry programs, bores pine tree.*





# GEORGIA



Left to right — Miss Georgia Forestry, Gloria Gottis; Governor Carl Sanders; George Bozmore, donor of portrait honoring Dr. Charles H. Herty; and Forestry Commission Director Roy Shirley.

## WATERSHED CONTROL

When rain falls, water runs down hills and slopes into nearby streams and lakes. If it runs too fast, it can wash away valuable land, create gullies, and cause flooding. Measures must be taken to protect the watershed and rebuild eroded land.

The Georgia Forestry Commission cooperates with the Soil Conservation Service and Soil and Water Conservation Districts in 19 Public Law 566 small watershed control projects. These, plus the Coosa River Flood Prevention Project, involve 2,220,243 acres of land.

loblolly pine is the principle tree planted in watersheds to help stabilize soil. Some white pine has been planted in mountain areas. Most trees are planted by machine except for hand planting in gullies.

In addition to plantings by Forestry Commission crews, some landowners plant their own critically eroded areas. Commission Foresters give technical supervision to all forestry measures on watersheds. On adverse areas, site preparation by breaking up rock and hard soil is a prerequisite to planting. Brush check dams may also be used.

The Coosa River Flood Prevention Project covers 1,273,000 acres, involving 18 subwatersheds in 13 counties. The extreme north portion of the watershed is on the Chattahoochee National Forest. So far, 1,650 acres of critical area have been planted with Georgia Forestry Commission personnel doing most of the planting and providing technical assistance.



William T. Steele and family stroll through five-year slash pine plantation, Dade County, Georgia.



Planting eroded area — North Broad River Watershed, Georgia.



# LOUISIANA

## HARDWOOD MANAGEMENT

Half the land area in Louisiana is in timber, and half of this is in hardwoods. The Louisiana Forestry Commission has two offices to help hardwood landowners with their management of river fronts, cypress-tupelo swamps, first bottoms, etc. The "North Delta" office is at Winnsboro, and the "South Delta" at Lafayette.

One of the State Forester's jobs is to cooperate with private timber owners, civic groups, clubs, and State Departments in making plans for protection, management, and replacement of forests.

Recommendations may be very detailed for small owner-ships, but more general for large ones. Foresters will mark a limited amount of timber for cutting and keep a running tally of the volume estimates. They advise the landowner on marketing, stand improvement, tree planting, and setting up and carrying out pest control measures.

The Commission furnishes landowners with a list of forestry consultants. It recommends that a consultant be called on in all cases in which land area or timber values justify the employment of a paid consultant — whether the land be privately or publicly owned.



*State Forester James E. Mixon dedicates Madison Hordin demonstration forest near Tallulah. Madison Parish School Board President H. P. King looks on.*



*Unloading hardwood logs from barge, Natchez, Mississippi.*

# MISSISSIPPI

## REFORESTATION



*Packaging seedlings in Kraft polyethylene bags—Mississippi Forestry Commission nursery, Winona.*



*Cone kiln at Commission's Waynesboro nursery.*

From 1950 through fiscal year 1963, far more acres of clear-cut and abandoned Mississippi lands were planted to trees than in all previous years — 1,178,079 acres planted by all classes of ownerships combined.

No longer can Mississippians look across country at mile upon mile of stumps. These lands are now producing a profitable crop of trees for present and future generations. The Mississippi Forestry Commission's third and largest nursery went into production in 1957 at Waynesboro. The 1958 growing season saw 105,113,000 seedlings produced at the three nurseries, while 47,000,000 were being grown at the U. S. Forest Service nursery. Tree planting was looking up!

Gradual decline in demand for pine seedlings since 1960 has been partly offset by increased demand for hardwood, especially yellow poplar and cottonwood. Improved techniques of treating pine seed for direct seeding have also replaced part of the past demand. Landowners can now buy seed or seedlings from the Commission. Last year 4,535 acres were direct seeded.

Better production, know-how and techniques have improved seedling quality and output per unit acre during recent years. Mississippi has profited from its experience in using the recommendations of the cooperative Eastern Tree Seed Laboratory on storage, treating, and seeding rates. Improved root structure is obtained by root pruning. Nursery soil tests by Mississippi State University have shown the way on needed soil treatments.

*State Forester Jack Holman, right, and nurseryman Clarence Walley discuss pine seedling crop at Waynesboro nursery.*



*Planting time at Mississippi Forestry Commission's nursery.*





# NORTH CAROLINA

## RECORD FIRE SEASON

Spring and fall months were unusually dry in the South and woods were tinder dry. Foresters of the North Carolina Forestry Division often heard the words that mean fast action — "Forest fire!"

April 4, 1963, will long be known as "Black Thursday" in North Carolina. On that day, just one fire burned about twice as many acres of timber as all fires in 1962. Another fire which started that same day caused damage estimated at more than \$400,000, including many homes, race horses, and barns. The two fires burned over 92,000 acres of timber, plus thousands of acres of non-timber land.

Fires occurred so often during the spring that three planes operated almost full time, making air drops to stop the spread of flames. A contract plane of 2,000-gallon capacity also was used. Over 1,500 forest fires broke out in April.

During the spring and again in the fall, camp and picnic fires were prohibited in or near North Carolina woods.

When conditions got even more critical, the Governor twice closed certain wooded areas. After the spring flurry of fires, the danger eased until the middle of September when conditions again become critical and stayed that way until the first of November.

The number of forest fires in the State during the first ten months of 1963 was 4,196 compared to 2,626 the previous year. Acreage burned in this period amounted to 196,683 — more than four times that of 1962.

Many of the more serious fires were believed to be of incendiary origin. During the first six months of the year, 285 persons were prosecuted on charges of causing forest fires. The Arson Bureau of the State Insurance Department helped on investigations.



*State Forester Fred Claridge is briefed on fire situation at field headquarters by Assistant Paul Tillman.*



*State Forester checks flight plans with pilot before start of scouting mission.*

# SOUTH CAROLINA



*Vacational Agriculture and 4-H members studied Forestry at South Carolina State Forestry Commission's Boys Camp, 1963.*



*Planting site preparation—South Carolina State Forest, 1963.*

*State Forester Charles H. Flory holds citation presented to him by Southern State Foresters in Atlanta.*



## TIMBER STAND CONVERSION

Millions of acres of timberland across the South are not producing a merchantable crop because of low value weed trees. The South Carolina State Forestry Commission is in the midst of a program to convert about 35,000 acres of State-owned scrub oak land to pine.

The conversion plan was authorized by the South Carolina General Assembly in 1960. Each year about 6,000 acres of scrub oak land are cleared and planted to pine. At the present rate, the entire 35,000 acres will be converted by 1967.

The total cost of conversion of State lands is about \$25 an acre. Sale of scattered merchantable trees before clearing, and rental of some areas for watermelons for one season, bring in revenue about equal to the cost of conversion.

Private lands in South Carolina also are being converted at the rate of more than 20,000 acres a year. The cost is about the same as that on State forests. Salvage of scattered merchantable trees before clearing, rentals, and Agricultural Conservation Program assistance help some private landowners defray the cost of conversion.

South Carolina's conversion program is taking unproductive land and turning it into land growing profitable timber.

*Helicopter distributed fenuran pellets to control scrub oak on 200 acres of State land.*







*State Forester Donald E. Stouffer — Forestry Division, Oklahoma Department of Agriculture.*

## SHELTERBELTS

Wind as well as water can cause the loss of soil in the wide open spaces of the Plains States, so shelterbelts are used to protect the land. Two Farm Foresters serve Oklahoma landowners in the shelterbelt area, one at Enid, the other at Chickasaw.

The shelterbelt breaks the even flow of wind, thus preventing strong winds from blowing away topsoil and kicking up dust storms. Cottonwood, sycamore, or Chinese elm are generally used for two tall, center rows; red-cedar, Austrian pine, or Ponderosa pine for an evergreen row; and Russian olive, mulberry, buffalo berry, or Osage orange for a low shrub row.

Planning and managing shelterbelts call for special training. Direction, arrangement of rows, and selection of species are carefully planned. On proper site, a shelterbelt may grow 55 to 80 feet high in 15 years. A poorly planned shelterbelt may be worse than none.

Livestock windbreaks are popular in areas of Oklahoma suited for winter pasture. Three or four rows may be planted in a horseshoe shape with the end of the horseshoe to the east. The protected area is large enough for feeding facilities for more than 100 head of cattle.

In west central Oklahoma many farms have small areas especially suited for growing fence posts. About 700 trees per acre is the average planting rate. Post cuttings can be expected 8 to 12 years after planting.



*The most effective shelterbelt is "complete" from ground line to top of tallest trees.*



*Western Oklahoma black locust postlot ready for first cut of seven years — posts are good for 15 years without treatment.*



*Soil auger — important Farm Forester tool in the Plains to determine whether planting sites are suitable for species desired.*



# TENNESSEE

## SERVICE FORESTERS

Cooperative forestry depends in large part on the Service Forester, the man who works directly with the landowner.

The Service Forester is something of a "jack-of-all-trades" with a variety of duties. Along with his regular forest management advice, he may prepare management plans, provide technical assistance for reforestation and for programs such as the Agricultural Stabilization and Conservation Service and Public Law 566, appear on television or radio, and write newspaper articles. He is active in such groups as Rural Areas Development and county forestry committees.

The program is expanding all the time. In Tennessee, for example, the number of Service Foresters increased from six in 1953 to twenty in 1963. They now work with 2,000 landowners annually in 85 of the 95 Tennessee counties.

The aim is to provide service on a State-wide basis and Tennessee is well on its way. Since the program began, these Foresters have worked with more than 14,000 landowners on over 1,100,000 acres. Timber sold under improved forest management practices during this ten-year period is valued at \$6,000,000.

Management techniques vary. A mixed hardwood stand may have 20 or 25 sawtimber species and 10 or 15 non-commercial species. There's upland hardwood and bottomland hardwood, pine and pine-hardwood, cedar and cedar-hardwood, giving the Forester plenty of diversification.

Owners vary too — so the Forester's decisions are complicated by the clients' needs and wants.

Year by year the State is establishing new projects and employing more Foresters. They are placing more forest land under good management for more owners, thanks to the Service Forester.



Governor Frank Clement (center) accepts Som Beichler Award from Assistant Regional Forester D. A. Croig in honor of second consecutive year of outstanding forest fire prevention work. Fire Control Chief Evon Pitt, Forestry Division Director Carl I. Peterson, and Conservation Commissioner Donald M. McSweeney look on.

Service Forester and Scott County landowner examine timber stand improvement.



Director Carl I. Peterson and Management Chief W. F. Cowan observe rapid growth of six-year-old loblolly pine.





## TREE IMPROVEMENT

Trees do most of their growing by themselves, but man constantly is seeking to improve their characteristics.

The Texas Forest Service has an ambitious Tree Improvement Program. The major objectives are to develop a drought-hardy strain of loblolly pine and to improve wood quality, growth rate, and form in loblolly and slash pine. The Program combines breeding and research.

Drought resistance differs by seed source. It even varies among individual trees from the same source. The Texas effort to develop more drought resistance involves both field and artificial tests. The artificial tests, using raised mounds of earth, have plastic-covered shelters over seedlings to simulate drought conditions. Seed orchards are established with the survivors.

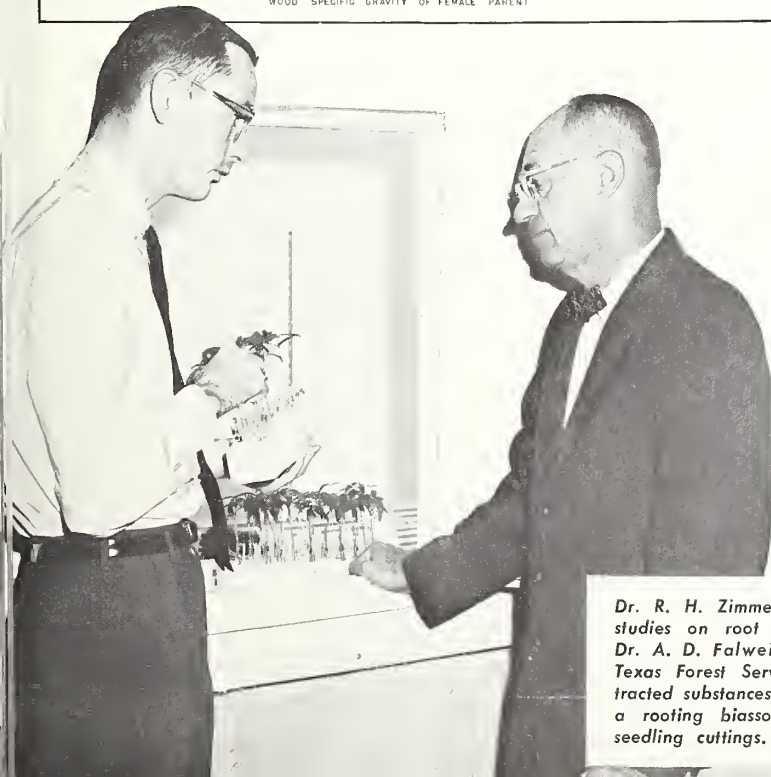
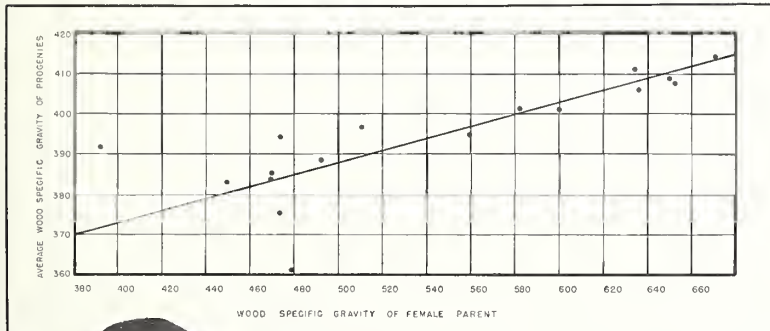
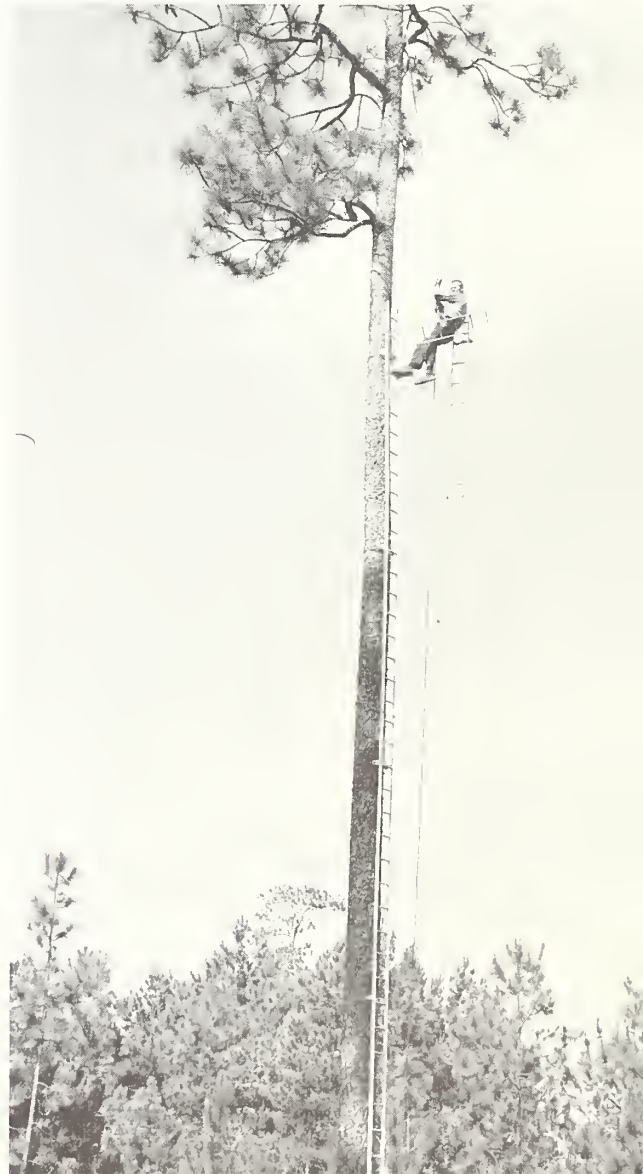
High wood specific gravity increases lumber strength and yields more pulpwood. But low specific gravity is desirable for certain pulp and papermaking properties. The Texas Program is developing both high and low specific gravity strains of loblolly pine and high specific gravity slash pine.

This research also aims at improving straightness, crown efficiency, height, and diameter growth. Other phases involve quantitative genetics, flower production, and the physiology of rooting and aging.

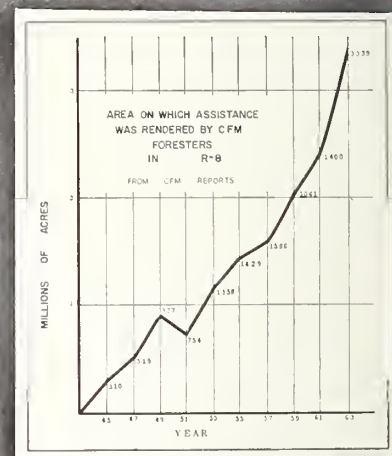
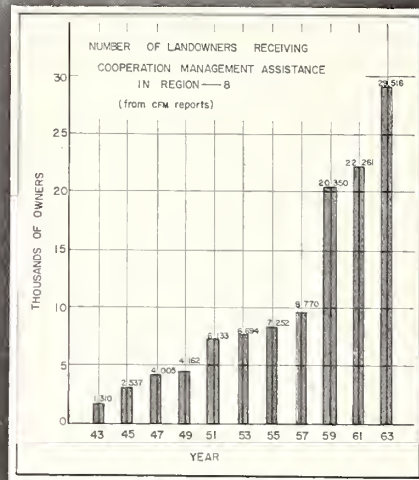
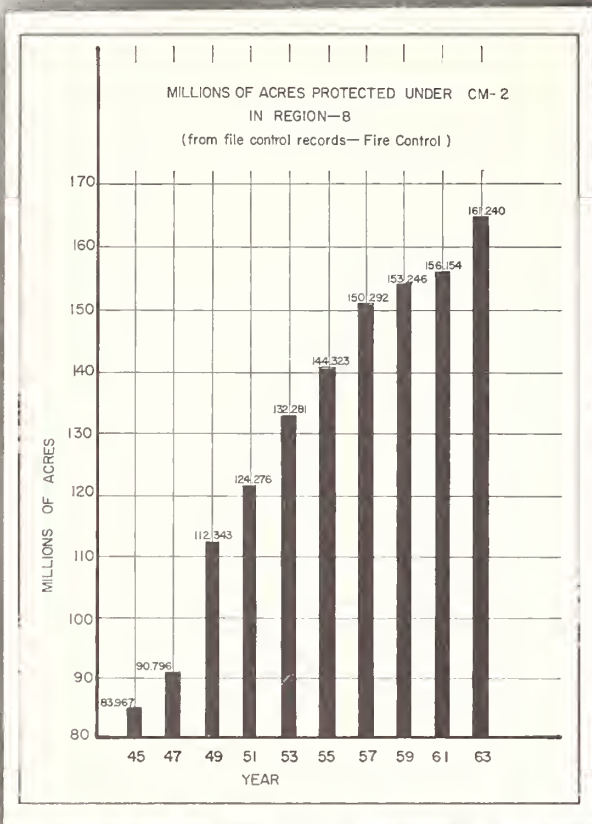


*Drought hardiness of pine seedlings tested by artificially created conditions.*

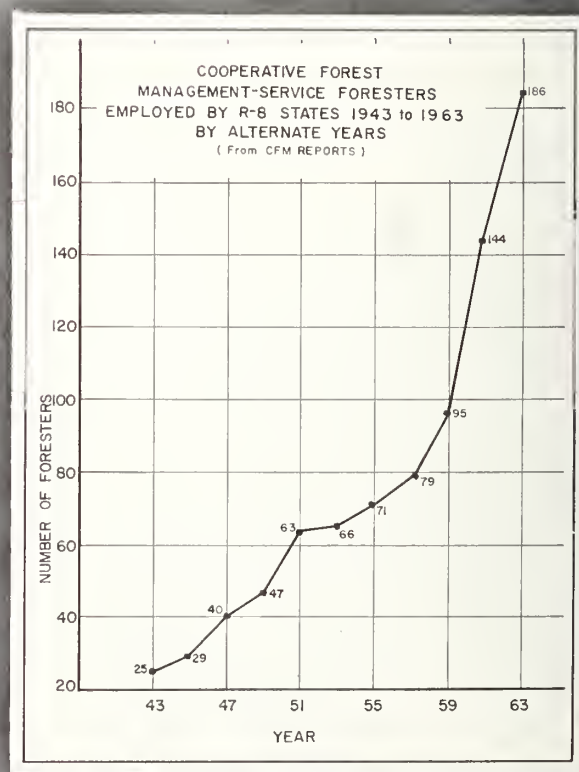
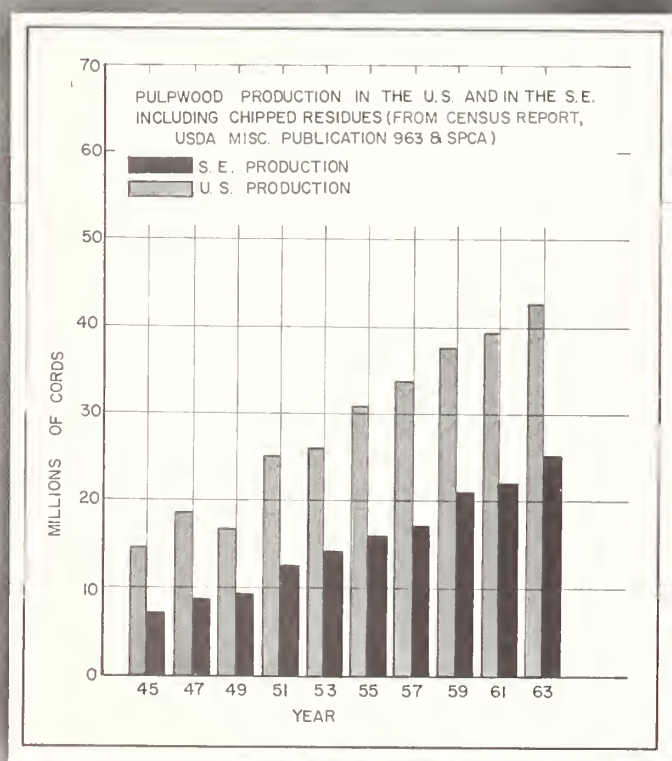
*Tree improvement researcher removes Swedish ladder as he descends.*



*Dr. R. H. Zimmerman discusses studies on root initiation with Dr. A. D. Falweiler, Director, Texas Forest Service. Pine extracted substances are tested by a rooting bioassay using bean seedling cuttings.*



(CM-2 Clark - McNary Act Section 2)  
(CFM - Cooperative Forest Management Act)  
(SPCA Southern Pulpwood Conservation Association)





# Cooperative Extension Services

## THE EXTENSION FORESTER

Extension Foresters are staff members of land grant colleges in the southern states. They cooperate with county governments, State forestry groups, the U. S. Forest Service, Soil and Water Conservation Districts, and other agencies. They publish educational bulletins on forestry to keep the public informed.

The Extension Forester is a vital part of cooperative forestry in the South. The Extension Service is called the educational arm of the Agriculture Department.

Forestry workshops, camps, demonstrations, and field days are part of the Extension forestry program. The Extension Forester directs the planning and organization for such affairs. He may talk on good forest management at a 4-H Camp, hold workshops for County Agents, and work with 4-H youngsters on forestry projects as part of their club program.

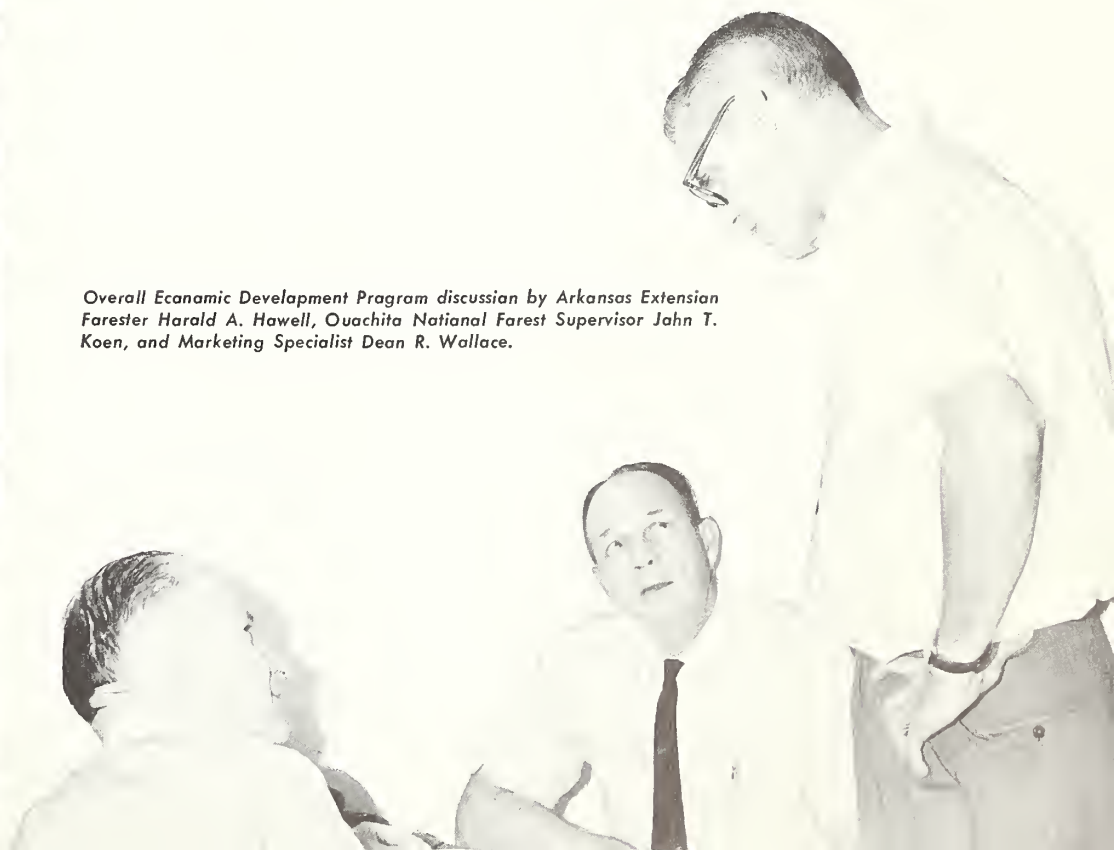
The Extension Forester promotes good timber management and marketing practices. He holds community meetings to tell local people about this work. He emphasizes that money is made selling timber rather than in growing it, and stresses the importance of a written sale contract.

Extension Foresters often work with U. S. and State Forest services, and State conservation associations in planning and setting up fair exhibits. Oklahoma and North Carolina are two recent examples of such cooperative work for State fair exhibits. Frequently they set up exhibits alone or with the help of the County Agent and 4-H Club members.

A big part of the Extension Forester's work is in the field of television and radio and in showing slide lectures or motion pictures to schools, civic, and other organizations. He may discuss good forestry practices or tell about National Forest recreation, private land multiple use, or other opportunities in improved forestry. Such information is also furnished through articles in newspapers and farm magazines.

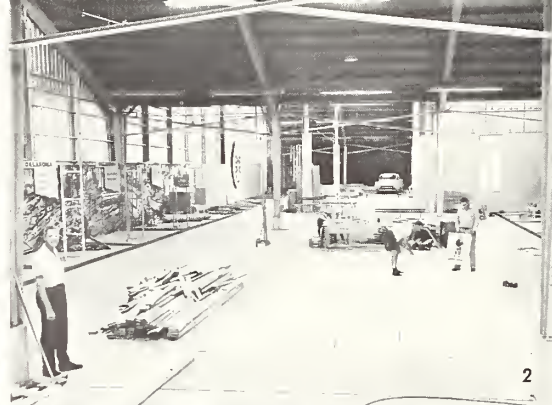
The Extension Forester may also help rural development through cooperation with timber industries in promoting more and better use of forest products. This program helps maintain demand and stumpage prices.

*Overall Economic Development Program discussion by Arkansas Extension Forester Harold A. Howell, Ouachita National Forest Supervisor John T. Koen, and Marketing Specialist Dean R. Wallace.*





## COOPERATIVE EXTENSION SERVICE FORESTRY PROJECTS

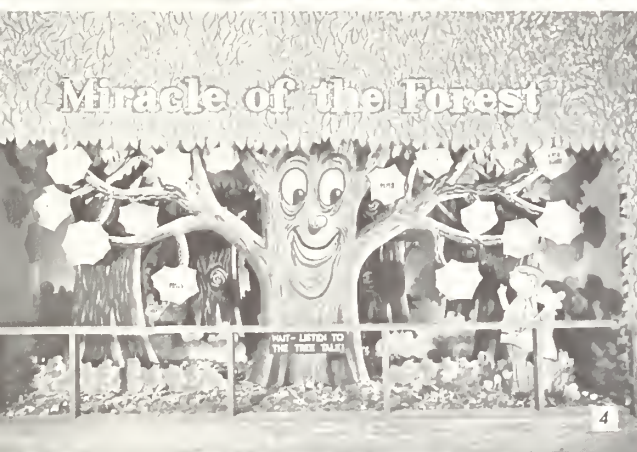


1 — Extension Forester educates landowner on need for thinning a natural stand of loblolly pine.



2 — Extension Forester Lee Clymer (left) coordinated planning for largest forestry exhibit ever shown at State Fair. The Oklahoma Forestry Division, Extension Service, State University, U. S. Forest Service, and forest industry cooperated on this project.

3 — Extension Forester leads youngsters on forestry field trip.



4 — Section of North Carolina State Fair forestry exhibit produced through cooperation of State, Federal, and forest industry assistance. Extension Forester J. C. Jones was chairman of Action Committee.

5 — Extension Service Forester advises landowner of importance of volume determination of time of sale.



6 — Texas Agricultural Extension Service films television short at recreation area. These and television break slides, radio tapes, and news releases are making Texans aware of opportunities in the National Forests. Thousands of copies of the "Welcome to National Forests in Texas" leaflet were distributed by Texas County Agents.



# *The National Association of Soil and Water Conservation Districts*

## CONSERVATION, DEVELOPMENT AND SELF-GOVERNMENT ARE THE PRIME REQUISITES OF THIS ORGANIZATION

Soil Conservation Districts are local organizations of government through which people band together in solving their conservation problems. A District's objective is to encourage all landowners in the District to utilize the best practices and technical assistance in adopting and initiating a complete conservation plan for their land.

State Foresters cooperate with Soil Conservation Districts by furnishing forestry advice and assistance on the woodland portion of the District cooperator's land. Soil Conservation District sponsorship of good land use planning and forestry has made a large contribution to the recent increase in acres planted to trees, and has stimulated more interest in better forest management. In providing technical assistance to cooperating landowners, the District may request the State Forester to furnish assistance with developing and applying the forestry phases of the conservation plan. State Foresters, through cooperative agreement with Districts, are happy to provide forestry advice and assistance to District cooperators.

In addition, Public Law 566 small watershed projects usually include land treatment measures for the forested portion of the watershed. Under its cooperative agreement with State Foresters, the U. S. Forest Service asks the State Forester to assume responsibility for servicing the forestry measures on Public Law 566 projects. Here again, the State Forester cooperates with Soil Conservation Districts, usually one of the sponsoring agencies, by servicing the forestry measures on Public Law 566 small watershed projects. In addition, State Foresters will cooperate with the Districts by servicing forestry work on Resource Conservation and Development Projects initiated under the Food and Agriculture Act of 1962.

Still another important influence of Districts results from cooperative Memoranda of Understanding between Districts and National Forests in many States. These memoranda are authorized by the Cooperative Agreement between the Secretary of Agriculture and Districts.

The South's growing role in forestry will offer continuing expansion of cooperation and mutual support between Soil Conservation Districts, State Foresters, and the U. S. Forest Service.



*Marian S. Mank, Jr., of Batchelor, Louisiana, is the dynamic President of the National Association of Conservation Districts.*

*North Mississippi gullied field completely stabilized by planted lablally pine.*



*State Conservationist Cecil Chapman leads directors of Atlanta U. S. Department of Agriculture Club on tour of pilot watershed dam sponsored by Broad River Soil and Water Conservation District, Stephens County, Georgia.*



# Region-Wide COOPERATIVE PROJECTS

## NAVAL STORES

"Tar" making began in Virginia soon after settlement of Jamestown in 1607. "Naval stores" were among the first products exported from this country, and remain an important segment of export trade today.

The term "naval stores" derives from early use of resin in calking the seams of wooden ships and in preserving their sails and ropes. Records of such use date back to 315 B.C. Resin and turpentine obtained from distillation of crude longleaf and slash pine gum are basic raw materials for hundreds of chemical products.

Early naval stores practices were quite destructive. Forest Service research has changed this on 85 percent of production. The Naval Stores Conservation Program, administered by the U. S. Forest Service for Agricultural Stabilization and Conservation Service since its establishment in 1936 at the urging of the American Turpentine Farmers Association, has been a main cog in this educational program. Extension and State Foresters have also played a big part.

The Rural Areas Development Program has been materially assisted by increased naval stores production of the past three years. Nearly 5,000 producers provide work for thousands of semi-skilled workers from South Carolina to Texas. Georgia, Florida, and Alabama are the top producing States.

With the new methods of working naval stores, the entire tree is later sold for sawtimber, poles, piling, or pulpwood without the wasted jump-butt of former days. Properly coordinated in timber management plans, naval stores can increase timber income up to 50 percent.

Research predicts that by 1970 demands will increase 5 percent for resin and 17 percent for turpentine.



Entire family joins Area Forester to examine quality of naval stores work and quantity of young timber on their property.



Gum naval stores gave the "first pay day" to producer of these choice poles — note worked "faces" on butts.



Full-length trees move to mill after being worked profitably for gum naval stores.



Father and son find time and place to hunt.





Detection of bark beetle, oak wilt, and other killing insect and disease outbreaks are conducted from the air.

## FOREST INSECT AND DISEASE CONTROL

Work is constantly underway to prevent, detect, evaluate, and suppress insect and disease enemies of forest trees. The Forest Insect and Disease Control Branch cooperates with managers of Federal and non-Federal lands. Work on non-Federal lands is through the State Foresters.

### Prevention

Prevention has two main objectives —

- ...To train land managers to use forestry practices that will develop and maintain conditions unfavorable for insect and disease outbreaks.
- ...To provide technical assistance to land managers for preventive measures in harvesting, planting, stand improvement, and other disturbances.

### Detection

Early detection of destructive insect and disease outbreaks is important to control. Training land managers in recognition of abnormal losses will result in systematic detection and prompt reporting.

### Evaluation

Evaluations determine the need, feasibility, and justification for suppression. This information is presented to land managers for their consideration in deciding for or against control.

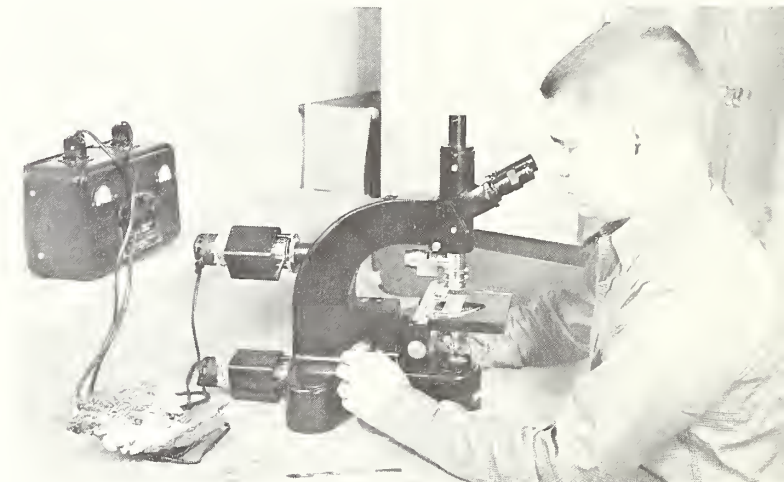
### Suppression

The first objective of suppression is reduction of losses to tolerable levels by —

- ...evaluating potential losses
- ...developing adequate control plans
- ...training in approved control methods
- ...providing supervision
- ...weighing impact of control on other resources such as fish and wildlife, and
- ...evaluating effectiveness and value of control.



Evaluation of elm spanworm infestations consists of determining populations, extent of infestation, presence of parasites and predators, and effect on host tree.



Pathologist identifies tree disease at Zone 1 headquarters, Asheville, North Carolina.



Georgia Forestry Commission crew controls southern pine beetle with 0.5 percent BHC spray.





*Typical hillside abandoned by the ravages of erosion, 1948.*



*Same hillside became productive in 1957 and was stabilized by planting loblolly pine.*

### YAZOO-LITTLE TALLAHATCHIE FLOOD PREVENTION PROJECT

The Yazoo-Little Tallahatchie Flood Prevention Project aims at controlling water runoff, erosion, and flooding of private lands in North Mississippi.

This cooperative land treatment program, directed jointly by the Soil Conservation Service and U. S. Forest Service, works through local landowners and Soil Conservation Districts. It gets fire protection help and tree seedlings from the Mississippi Forestry Commission; cost sharing from Agricultural Stabilization and Conservation Service; loans from Farmers Home Administration; and public education assistance from the Extension Service.

From 1948 through 1963, loblolly pine plantations were established on 10,000 private ownerships covering over 400,000 acres. Timber stand improvement work has been done on 135,000 acres.



*The rapid growth of grafted slash pine in seed archard will result in trees of improved genetic quality.*

### EASTERN TREE SEED LABORATORY

The South's forestry program has put major emphasis on stand regeneration and tree planting in recent years. This made it apparent that a seed testing laboratory was needed so the desired quantity and quality of seedlings could be grown. To meet this demand, the Eastern Tree Seed Laboratory was built in 1959 near Macon, Georgia.

Modern facilities of the Laboratory serve not only the Southern Region, but the entire Eastern United States and many western states. Seed samples for testing come to the Lab from nurserymen, direct seeders, seed dealers, and others who need test information.

It's estimated that the Laboratory furnishes information which affects more than 70 percent of the nursery stock grown in the United States. The research program has developed better methods for storage, stratification, testing, and handling of seed. Increasing emphasis is being put on getting more information about the source and quality of seed that will be used in reforestation.

The Seed Laboratory is operated under a cooperative agreement with the Southern Region of the Forest Service, the Southeastern Forest Experiment Station, the Georgia Forestry Commission, and Georgia Forest Research Council.

### RURAL AREAS DEVELOPMENT

Forest resources play an ever-increasing role in Rural Areas Development. Through better management, protection, and use, forested areas can multiply benefits threefold. State Foresters and Forest Supervisors have pledged support to local Rural Areas Development groups to help develop and use these resources. Today, over 260 public Foresters in the South are assigned to assist this program. Specialists in utilization, wildlife, recreation, watershed, and forest management support these Foresters. They draw on research results from laboratories, research centers, and forestry schools.



# OTHER REGIONAL ACTIVITIES

## THE NATIONAL FORESTS

### *Lands of Many Uses*

The National Forests in the South cover about ten million acres in eleven States. They are part of the 154 National Forests and 19 Grasslands in 41 States and Puerto Rico, totaling 186 million acres of lands of many uses.

All National Forests are managed to provide the most good to the greatest number of people in the long run. Management of wood, water, wildlife, forage, and recreation is coordinated through Multiple Use plans.



*Research Forester climbs superior tree to obtain pollen.*

#### TIMBER MANAGEMENT

The volume of National Forest timber cut in the South in 1963 was 794 million board feet, an increase of 18 million feet over the previous year. Sales of timber amounted to 800 million board feet, and another 87.5 million feet were offered for sale but not bought.

Reforestation continued at a high level with 53,781 acres either planted or direct seeded. The search for superior seed sources was intensified with 495 trees proposed for superior tree rating.

#### WATERSHED, WILDLIFE, AND RANGE MANAGEMENT

Significant progress was made in 1963 in the Region's program to control and manage range livestock. Grazing capacity estimates were completed on 40 percent of the ranges. Twenty percent of the estimated cattle that will use the forest now are under permit. Progressive soil surveys, watershed and wildlife habitat analyses, and a Wild Rivers study also highlighted the Division's work during the year.

#### FIRE CONTROL

The worst fire weather in 21 years made fires easy to start, rapid in spread, and difficult to control in 1963. The 2,569 fires on National Forests burned 40,892 acres. This number was the greatest since 1954, and the acreage burned the largest since 1956. Retardant air drops on forest fires became a more important control tactic in 1963.

The Fire Simulator debut in the South made realistic training in large fire management possible without having an actual fire.



*Mrs. Terry Rice, Regional Office Receptionist, wears official uniform, created by famous dress designer Hattie Carnegie.*



## RECREATION AND LANDS

The demand of Americans for outdoor activity continues to increase, and southern National Forests are working to meet that demand. In 1963, more recreational facilities were built in southern forests than in any previous year.

There were 20 new sites built with Accelerated Public Works funds, and other sites and areas were developed or expanded with regular recreation construction money. Nearly 1,000 new family camping and picnicking units were built.

Six new Scenic Areas brought to 32 the number of near-natural areas in the Region. Planning and construction got under way for three new scenic recreation highways: The Skyline Drive in Arkansas and Oklahoma, The Richard B. Russell Scenic Highway in Georgia, and The Robbinsville-Tellico Plains Scenic Highway in Tennessee and North Carolina. Regional Office and Forest Recreation Planners from the Ouachita National Forest produced in cooperation with the Soil Conservation Service a detailed and comprehensive development plan for the proposed Lake Charles Park, Public Law 566 project, near Walnut Grove, Arkansas.



*Picnicking on National Forests. Family Fun.*

## OPERATION

In 1963 the Southern Region made its greatest accomplishments in construction and developmental work since the peak of the Civilian Conservation Corps program. This was possible through the use of Accelerated Public Works funds and regular appropriations.

The Region received over \$10,000,000 of Accelerated Public Works money since the start of the program, and the funds financed a variety of activities.

The Branch of Administrative Services administered 296 contracts of which 165 were Accelerated Public Works contracts involving construction or maintenance work. A complete radio system was installed on the National Forests in Alabama and on the Pisgah District in North Carolina.

## ENGINEERING

Road and bridge construction highlighted the work of the Engineering Division in 1963. Accelerated Public Works funds helped build 193.8 miles of road at a cost of \$1,801,363 and 20 bridges at a cost of \$220,768. Road construction primarily for recreation cost \$502,500.

Plans were made for the construction or rehabilitation of six dams. Reconstruction of the spillway began at Storm Creek Lake, Helena, Arkansas.



*Bridge construction on forest access road.*

## PERSONNEL MANAGEMENT

The Southern Region has emphasized a coordinated professional recruitment program with the U. S. Civil Service Commission and colleges and universities in the South. The Region recruited 75 professional employees from 15 different colleges and universities. Employee development and training emphasized high standards in 1963. Safety received more attention, too, as the Accelerated Public Works projects put many new men to work.

## FISCAL CONTROL

In fiscal year 1963, National Forest expenditures in the Region were \$24,471,000. Capital improvements increased by \$10,626,000. National Forest collections amounted to \$20,820,000.

A considerable portion of the sum spent by National Forests went for roads, developing recreation facilities, timber harvesting, seeding, planting, and wildlife habitat improvement. All these activities add to the future value of National Forests.

State cooperative programs and Naval Stores expenditures were \$5,816,000. The Southeastern and Southern Forest Experiment Stations research investment was \$5,381,000.



# The First COOPERATIVE FOREST MANAGEMENT PROJECT

The Cooperative Forest Management Program got its start on a farm in South Georgia in November 1940.

E. C. Fancher of Pearson decided to have a written management plan prepared for his forest by a Project Forester. He was the first landowner in the United States to have such a plan prepared.

Project Forester E. N. Cooper of the then Georgia Department of Forestry and C. W. Chapman, Soil Conservation Service technician, assisted Fancher in organizing his management plan for 175 forest acres. Fancher has followed the plan and credits it with providing his family a good standard of living for the past 23 years.

That first plan called for a 35-year rotation, setting up a system of pre-commercial thinning, improvement cuttings, naval stores operations, and harvest cuttings. The naval stores plan included working two faces, one at a time for five-year periods.

The first wood cut under the plan was 26 units of hardwood pulpwood. The two carloads of black gum pulpwood sold for \$4.75 per unit loaded. It was the first hardwood pulpwood ever shipped from Atkinson County.

Fancher was among the first to use acid on his naval stores faces, doing this in 1943. He's now retired but has 211 forest acres hard at work, representing a volume of 109,000 board feet of pine, 88,000 board feet of hardwood saw-timber, 541 cords of pine, and 488 cords of hardwood pulpwood.

Fancher points out that the best money ever spent by the County was in 1951 when it came under organized forest fire protection. He believes that protection and good forest management are paying off for our mistakes in the past.



*E. C. Fancher (right) discusses tree growth with Ed N. Cooper (center), America's first Farm Forester, now paper company Forest Supervisor; and Lewis Gillis, Form Forester, Georgia Forestry Commission.*



*Mr. Fancher examines increment core from one of his pines.*





**U.S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE - SOUTHERN REGION**

